



UNITED STATES PATENT AND TRADEMARK OFFICE

CM
UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/820,205	04/06/2004	Daniel Scott Woodman	22090-3	7418

7590 08/29/2006

John S. Beulick
Armstrong Teasdale LLP
Suite 2600
One Metropolitan Square
St. Louis, MO 63102

EXAMINER

LUKS, JEREMY AUSTIN

ART UNIT	PAPER NUMBER
----------	--------------

2837

DATE MAILED: 08/29/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/820,205	WOODMAN ET AL.	
	Examiner	Art Unit	
	Jeremy Luks	2837	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 August 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Holtrop (4,476,183) in view of Juriga (5,536,556), further in view of Weber (4,940,629), and further in view of Haussling (4,828,910).

With respect to Claims 1, 3, 10, 11, 13, 20, 22, 23 and 26, Holtrop discloses a porous fiber reinforced thermoplastic core layer (Figure 2, #13) comprising a thermoplastic material (Col. 3, Lines 36-37), said core layer (13) having a first surface and a second surface; a tie layer (16) covering said second surface of said core layer (13); a barrier layer (12) covering said tie layer (16), said tie layer (16) bonding said barrier layer (12) to said core layer (13) (Col. 3, Lines 50-55); and a fabric layer (21) comprising a non-woven fabric bonded (18) to said barrier layer (12) (Col. 5, Lines 3-10), said fabric layer (21) forming an outer surface of a panel (10). Holtrop fails to disclose a thermoplastic core layer comprising a thermoplastic material and from about 20 weight percent to about 80 weight percent fibers, a density from about 0.2 gm/cc to about 1.8 gm/cc; a tie layer comprising a thermoplastic material; and a barrier layer comprising a thermoplastic material having a melting temperature higher than the

Art Unit: 2837

melting temperature of said core layer thermoplastic material; a decorative layer comprises a thermoplastic film comprising at least one of polyvinyl chloride, a polyolefin, thermoplastic polyester, and a thermoplastic elastomer; a tie layer having a low melting temperature covering a second surface of a core layer, and said tie layer bonding a barrier layer to said core layer; and a barrier layer having a melting temperature higher than that of the tie layer. Weber discloses a thermoplastic core layer comprising a thermoplastic material and from about 20 weight percent to about 80 weight percent fibers, a density from about 0.2 gm/cc to about 1.8 gm/cc (Col. 1, Lines 44-49).

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the apparatus of Holtrop, with the apparatus of Weber to provide composite materials which are notable for low density, excellent heat insulation properties, an outer skin of high strength and high surface quality, high flexural strength, high energy absorption in relation to mechanical impact, reduced thermal expansion and cold flow tendency and a favorable flammability rating combined with simple manufacturing and processing properties.

Weber fails to disclose a tie layer comprising a thermoplastic material, and a barrier layer comprising a thermoplastic material having a melting temperature higher than the melting temperature of said core layer thermoplastic material; a decorative layer comprises a thermoplastic film comprising at least one of polyvinyl chloride, a polyolefin, thermoplastic polyester, and a thermoplastic elastomer; a tie layer having a low melting temperature covering a second surface of a core layer, and said tie layer bonding a barrier layer to said core layer; and a barrier layer having a melting

Art Unit: 2837

temperature higher than that of the tie layer. Juriga discloses a tie layer (Figure 2, #42) comprising a thermoplastic material (Col. 6, Lines 27-35); a decorative layer (Figure 4, #28) comprises a thermoplastic film (50) comprising at least one of polyvinyl chloride, a polyolefin, thermoplastic polyester, and a thermoplastic elastomer (Col. 8, Lines 10-25); a tie layer (Figure 2, #42) having a low melting temperature (Col. 6, Lines 20-23) covering a second surface of a core layer (36), and said tie layer (42) bonding a barrier layer (38) to said core layer (36).

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the structures of Holtrop as modified, with the apparatus of Juruga to provide a thermosetting adhesive to the structure that will bond and harden after being heat molded to secure the various layers in the molded absorber to one another, and be able to withstand heat distortion or deterioration.

Juriga fails to disclose a barrier layer comprising a thermoplastic material having a melting temperature higher than the melting temperature of said core layer thermoplastic material; and a barrier layer having a melting temperature higher than that of the tie layer. Haussling discloses a barrier layer (Figure 1, #2) comprising a thermoplastic material having a melting temperature higher than the melting temperature of said core layer (3) thermoplastic material (Col. 2, Lines 56-68; Col. 4, Lines 27-33); and a barrier layer (Figure 1, #2) having a higher melting point (Col. 6, Lines 27-31) than that of the tie layer described by Juriga.

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the apparatus of Holtrop as modified, with the apparatus of

Art Unit: 2837

Haussling to compress the fibers of the core and bind the core to the barrier layer in one step of heat molding. The core fibers will melt and form a final shape and desired acoustical properties, while the barrier layer will bond to the core without changing its form.

With respect to Claims 2, 12 and 21, Holtrop discloses a decorative layer (Figure 2, #25) bonded to a first surface of a core layer (13).

With respect to Claims 4-6, 8, 9, 14-16, 18, 19, 24, 25 and 27, Holtrop discloses decorative layer (Figure 2, #25) comprising a layered laminate comprising a foam core (14), an adhesive layer (19) between the core layer (13) and decorative layer (25) (Col. 5, Lines 50-53), and woven or non-woven fabric (22), said foam core (14) comprising at least one of polypropylene, polyethylene, polyvinyl chloride, and polyurethane (Col. 4, Lines 17-21 and 28-31), and non-woven fabric (22) comprising at least one of polyvinyl chloride, a polyolefin, thermoplastic polyester, and a thermoplastic elastomer (Col. 5, Lines 6-17). Holtrop fails to disclose a thermoplastic adhesive comprising at least one layer of thermoplastic adhesive material. However, Juriga discloses a thermoplastic adhesive comprising at least one layer of thermoplastic adhesive material (Col. 6, Lines 27-35). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the structures of Holtrop as modified, with the apparatus of Juruga to provide a thermosetting adhesive to the structure that will bond and harden after being heat molded to secure the various layers in the molded absorber to one another, and be able to withstand heat distortion or deterioration.

With respect to Claims 7 and 17, Holtrop discloses decorative layer (Col. 6, Lines 55-58) comprising a layered laminate (Figure 3, #30) comprising a foam core (34), a non-woven batting (35), and woven or non-woven fabric (42), said foam core (34) comprising at least one of polypropylene, polyethylene, polyvinyl chloride, and polyurethane (Col. 4, Lines 17-21 and 28-31; Col. 6, Lines 3-10), said non-woven batting (35) comprising at least one polyester material and polyamide fibers (Col. 6, Lines 2-3).

Response to Arguments

2. Applicant's arguments filed 8/2/06 have been fully considered but they are not persuasive. The Examiner maintains that the obvious combination of Holtrop, Juriga, Weber and Haussling teach all of the limitations claimed by Applicant.

3. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., the characteristics of the barrier layer as referenced on page 3 of Applicant's remarks to Paragraphs 0012 and 0021 of Applicant's *Specification* (emphasis added)) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). The Examiner disagrees with Applicant's interpretation of Haussling. The laminated panel of Haussling is a sound-absorbing panel (see title) comprising multiple layers with fiber-reinforced thermoplastic and a barrier layer. The word barrier on its own is defined as

“anything built or serving to bar passage.” Applicant has no limitations directed toward the barrier layer’s sound absorbing characteristics or that it is a *sound* barrier layer.

Conclusion

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeremy Luks whose telephone number is (571) 272-2707. The examiner can normally be reached on Monday-Thursday 8:30-6:00, and alternating Fridays.

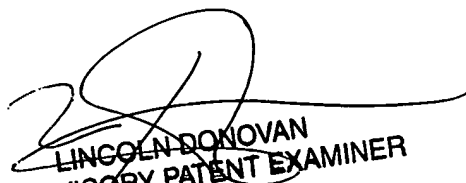
If attempts to reach the examiner by telephone are unsuccessful, the examiner’s supervisor, Lincoln Donovan can be reached on (571) 272-1988. The fax phone

Art Unit: 2837

number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Jeremy Luks
Patent Examiner
Art Unit 2837



LINCOLN DONOVAN
SUPERVISORY PATENT EXAMINER